

We claim:

1. An adhesive composition comprising at least one NCO-terminated hydrophilic urethane prepolymer derived from (a) an aromatic diisocyanate substantially all of which is in the para configuration and (b) a polyol component.

5 2. The adhesive of claim 1, wherein said aromatic diisocyanate is substituted with at least one electron withdrawing group.

3. The adhesive of claim 1, wherein said aromatic diisocyanate is selected from the group consisting of p-phenylene diisocyanate (hereinafter referred to as PDI), 2,4-tolylene diisocyanate (TDI), diphenylmethane-2,4'-
10 diisocyanate (MDI) and p isocyanatophenyl sulfonyl isocyanate.

4. The adhesive of claim 1, wherein said aromatic diisocyanate is substituted with at least two electron withdrawing groups.

5. The adhesive of claim 1, wherein said aromatic diisocyanate is substituted with four electron withdrawing groups.

15 6. The adhesive of claim 1, wherein said electron withdrawing group is selected from the group consisting of halogen groups, carbonyl groups, carboxyl groups, nitrile groups, nitro groups, phosphonate groups, phosphate ester groups and combinations thereof.

7. The adhesive of claim 1, wherein said electron withdrawing group is
20 a fluorine group.

8. The adhesive of claim 1, wherein said aromatic diisocyanate is substituted with four fluorine groups.

9. The adhesive of claim 1, wherein said polyol component is selected from the group consisting of polyether polyols.

10. The adhesive of claim 1, wherein said polyol component is the reaction product of one or more alkylene oxides with one or more compounds
5 containing at least two active hydrogen atoms.

11. The adhesive of claim 1, wherein said polyol component is the reaction product of ethylene oxides with one or more compounds containing at least two active hydrogen atoms.

12. The adhesive of claim 1, wherein said polyol component is the
10 reaction product of one or more alkylene oxides with one or more compounds selected from the group consisting of polyhydric alcohols, polyhydric phenols, amines, polycarboxylic acids and phosphorous acids.

13. The adhesive of claim 1, wherein said polyol component is the reaction product of one or more alkylene oxides selected from the group
15 consisting of ethylene oxide, propylene oxide, 1,2-butylene oxide, 2,3-butylene oxide, 1,3-butylene oxide, 1,4-butylene oxide, styrene oxide and epichlorohydrin with one or more compounds containing at least two active hydrogen atoms.

14. The adhesive of claim 1, wherein said polyol component is selected from the group consisting of polyether polyols having an equivalent weight of 100
20 to 5,000 daltons.

15. The adhesive of claim 1, wherein said polyol component is selected from the group consisting of polyether polyols having an oxyethylene content of suitably at least 30%.

16. The adhesive of claim 1, further comprising one or more physiologically active materials selected from the group consisting of antimicrobials, local anesthetics, antihistamines, antiphlogosis analgestics, antibiotics, astringents, vitamins, antifungal agents, peripheral nervous system anesthetics, vasodilators, hormones, crude drug essences, tinctures, crude drug powders and hypotensive agents.

17. The adhesive of claim 1, further comprising one ore more fillers selected from the group consisting of carbon black, metal oxides, silicates, acrylic resin powders and ceramic powders.

18. The adhesive of claim 1, further comprising one ore more softening agents selected from the group consisting of dibutylphosphate, dioctylphosphate, tricresylphosphate and tributoxyethylphosphates.

19. The adhesive of claim 1, further comprising one ore more stabilizers selected from the group consisting of trimethyldihydroquinone, phenyl-β-naphthyl amine, p-isopropoxydiphenylamine and diphenyl-p-phenylene diamine.

20. An adhesive composition comprising at least one NCO-terminated hydrophilic urethane prepolymer derived from (a) an aromatic diisocyanate substantially all of which is in the para configuration substituted with at least one fluorine group and (b) a polyol component comprising ethylene oxide.

21. A method comprising:
applying an adhesive composition comprising at least one NCO-terminated hydrophilic urethane prepolymer derived from (a) an aromatic

diisocyanate substantially all of which is in the para configuration and (b) a polyol component to tissue.

22. A method as in claim 21 wherein the step of applying an adhesive composition comprises applying the adhesive composition over a tissue defect.

23. A method as in claim 21 wherein the step of applying an adhesive composition comprises applying the adhesive composition to seal a defect in an anatomical vessel.

24. A method as in claim 21 wherein the step of applying an adhesive composition comprises applying the adhesive composition over a defect in lung tissue.

25. A method as in claim 21 wherein the step of applying an adhesive composition comprises approximating two tissue surfaces and applying the adhesive composition in contact with the approximated tissue surfaces.

26. A method of preparing an adhesive comprising reacting (a) an aromatic diisocyanate substantially all of which is in the para configuration with (b) a polyol component to form a prepolymer.

27. A method as in claim 26 wherein the step of reacting an aromatic diisocyanate with a polyol component comprises reacting a diisocyanate substituted with at least one electron withdrawing group with a polyol component comprising ethylene oxide.